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1. INTRODUCTION

Write introduction to the topic

2. GEOMETRIC MODEL OF SCHEIMPFLUG IMAGING

A. Geometric Properties of Image for Tilted Lens and Sensor

A schematic of the optical system is shown in Fig. 1. The lens (equivalently the optical axis) is pivoted at a point that represents the origin of the camera coordinate frame . We also use the notation to represent the lens’ pivot and the origin of the coordinate frame. The exact meaning of should be clear from the context. The centers of paraxial entrance and exit pupils—represented byand —lie along the optical axis at distances and  respectively from . The image plane is pivoted about at a point that is located at  in the camera frame . The overloaded notation for the image coordinate frame also represents the origin of the image frame and the image plane pivot.

In the object space the chief ray from the object pointto the center of the entrance pupilhas a normalized direction cosineand makes an angle with the optical axis. In the image side the chief ray emerges from the exit pupilmaking an angle with the optical axis. It intersects the image plane at .

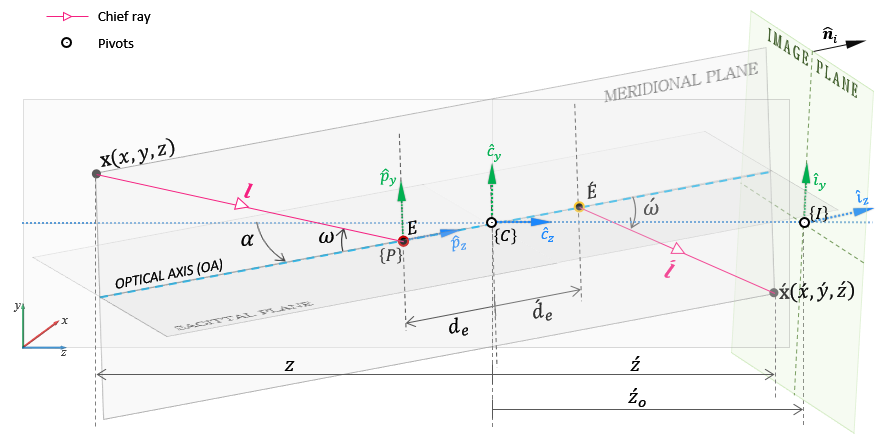
The pupil magnification  is defined as the ratio of the paraxial exit-pupil diameter to the entrance-pupil diameter. Following simple trigonometric manipulations, we obtain



1. Subsection 2

Apply the Equations style to create appropriate spacing above and below.

 (1)

 Fig. 1. Schematic of the general optical system with the lens pivoted atand the image plane pivoted at.

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1. M. R. E. Lamont, Y. Okawachi, and A. L. Gaeta, “Study about lasers and optics,” Opt. Lett. **38,** 3478 (2013).
2. A. Cordero-Davila, J. R. Kantun-Montiel, and J. Gonzalez-Garcia, in Imaging and Applied Optics Technical Digest 2012 (Optical Society of America, 2012), p. 13.